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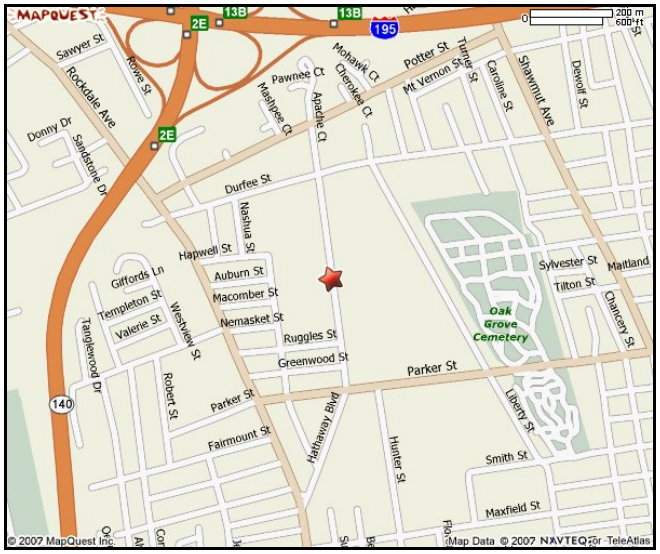
Evaluation of Possible PCB Exposure for the New Bedford High School/Keith Middle School and Neighborhood Questions & Answers (April 2008)



1. **Why is the Massachusetts Department of Public Health/Bureau of Environmental Health (MDPH/BEH) offering to evaluate possible exposure to PCBs?**

   In response to concerns from community members, including school staff and neighbors of the New Bedford High School and new Keith Middle School (NBHS/KMS), the New Bedford Board of Health and City Council asked the MDPH to determine whether cancer rates and other health outcomes may be related to PCB exposures in the neighborhoods in closest proximity to New Bedford High and Keith Middle Schools.

2. **What kind of study is MDPH conducting?**

   MDPH's Community Assessment Program (CAP) is conducting an exposure assessment among residents and current/former staff and students at NBHS and KMS. MDPH will administer an exposure assessment questionnaire to anyone who thinks they may have been exposed to PCBs either through attendance or employment at the schools or due to

residence in the neighborhood around the schools. MDPH will score the questionnaires to identify those individuals who have or had the greatest opportunity for long-term exposure to PCBs. One hundred individuals identified to have the greatest potential for exposure will be invited to have their blood serum tested for PCBs. MDPH will also compare rates of specific cancers in this area of New Bedford to rates of those cancers in the entire state.

3. What are polychlorinated biphenyls (PCBs)?

PCBs are mixtures of up to 209 individual chemicals called "congeners" that are manmade. There are no known natural sources of PCBs. Many commercial PCB mixtures are known in the U.S. by the trade name Aroclor. PCBs are either oily liquids or solids. PCBs have no known smell or taste.

4. What were PCBs used for?

In New Bedford, PCBs were used by Aerovox and Cornell-Dubilier Electronics to make transformers, capacitors and other electrical equipment. PCBs were also used in other products like fluorescent lighting fixtures, caulking materials, elastic sealants, and old microscope and hydraulic oils. The manufacture of PCBs was stopped in the U.S. in 1977. However, there are still many old products with PCBs and, because they do not break down easily, they remain in the environment.

5. How did PCBs enter the environment in and around the NBHS/KMS?

The New Bedford High School was built on land previously used as a burning dump by the City of New Bedford. It is likely that PCB-containing wastes were disposed of in the dump, along with municipal and other industrial waste. The Keith Middle School was built on the former McCoy Field, an athletic field which was created from fill that originated from the former town dump site. Also, the NBHS was built during peak years of PCB usage in certain building materials such as caulking and adhesives.

6. How may PCBs affect health?

The likelihood of health effects is related to the nature and duration of exposure to PCBs. Studies of exposed workers have shown the greatest effects. These effects can include skin lesions or irritations, fatigue, and increased pigmentation of the skin and nails. PCB exposures in the general population are far less likely to result in these types of effects.

Chronic effects in workers can occur after weeks or years of exposure or long after initial exposure to PCBs. A number of studies have suggested that these effects include immune system suppression, liver damage, neurological effects, and possibly cancer.

Studies have reported that infants born to mothers who were environmentally or occupationally exposed to PCBs had decreases in birth weight and abnormal responses in tests of infant behavior. PCBs are not known to cause birth defects.

7. Who is eligible to complete the exposure questionnaire?

MDPH encourages any current or former staff member of the New Bedford High School, the Keith Middle School, or neighbors of either school within a quarter-mile of the schools, who are concerned that they may have been exposed to PCBs in or near the schools. Staff who have worked in the schools for a long time or neighbors who have resided near the schools for a long time, especially if they brought fill home from the former dump, may have had a greater chance to come into contact with PCBs. Students and children are much less likely to have detectable levels of PCBs in their blood than adults, however MDPH welcomes current/former student participation in the exposure screening questionnaire.

8. Who will be asked to participate in blood testing?

Through the exposure assessment questionnaire, MDPH will identify those 100 individuals with the highest potential exposure to PCBs. These individuals will be sent a letter inviting them to give a blood sample.

9. Who created the exposure questionnaire?

MDPH's Bureau of Environmental Health developed the exposure questionnaire. It has been used successfully in many other PCB investigations in the state, to obtain information about people who were most likely to be exposed to PCBs. The questionnaire has been adapted for the NBHS/KMS area.

10. Will consent forms be necessary?

Yes. Consent forms must be filled out before completing the exposure assessment questionnaire and when the blood testing is done. These forms are required by state/federal law when confidential information is collected.

11. What types of questions are on the questionnaire? How long will it take?

The questionnaire has questions about age, gender, residency, diet, occupation, hobbies and specific environmental questions relating to the schools and the neighborhood. It will take about 45 minutes.

12. When and where will the exposure assessment questionnaire be given?

Trained interviewers will administer the questionnaire during the months of May and June to those who have signed a consent form. The dates and times available for the interviews will be publicized in the New Bedford Standard Times and The Portuguese Times, and provided to the New Bedford Teachers Association and the NBHS/KMS school administrators. Those interested will be able to call a toll-free number to schedule the interview. If you have already called either MDPH or the New Bedford Health Department and given your name and contact information, you will be automatically called and provided information on dates and places.

13. Will the consent form and questionnaire be translated into different languages?

Yes. Based upon the population characteristics of New Bedford, the consent forms and questionnaires will be translated into Portuguese and Spanish. A bi-lingual interpreter will be available at the time of the interview.

14. When will blood testing begin and where will it be done?

After the questionnaires are collected and scored by MDPH, individuals will be asked to provide blood samples. Letters will be sent to the 100 individuals invited to have their blood tested with information about how to schedule an appointment for the blood draw and where to go. The blood testing part of this investigation is likely to begin in the late summer of 2008.

15. Does MDPH have an approved method for PCB blood testing?

Yes. MDPH/BEH has worked with the MDPH Bureau of Laboratory Sciences, Environmental Chemistry Lab for many years on a variety of PCB exposure assessments in Massachusetts communities. The method for PCB blood/serum testing is the most up-to-date method available.

16. Why test blood (serum) and not fat tissues?

Blood serum testing is a very reliable indicator of exposure to PCBs as well as being the safest way of evaluating PCB exposure. Blood testing is much less invasive than collecting a fatty tissue sample for analysis. (Blood serum is the fatty part of the blood.) In addition, blood serum data from the national Centers for Disease Control's (CDC) Third National Report on Human Exposure to Environmental Chemicals are available for comparison to the New Bedford results.

17. Will children and students be included?

PCB levels in blood tend to increase with age; therefore children are unlikely to have levels in their blood that would suggest health concerns.

18. How long will it take for me to get my blood test results?

Once all of the blood samples have been analyzed, those who gave blood samples will be sent individual letters with only their own serum PCB results. According to the Bureau of Laboratory Sciences, once blood testing begins, it will take approximately 6 months to complete all of the analyses. A final report that summarizes the findings will be prepared; however, it will not identify any individual's results.

19. If I have questions, who should I contact?

You can call the MDPH Bureau of Environmental Health, Community Assessment Program at 617-624-5757 if you have additional questions.

MDPH Timeline for Evaluation of Potential Exposure to PCBs

- **MPDH outreach**
- **Concerned individuals complete interviews/exposure questionnaires**
- **MDPH reviews questionnaires**
- **MDPH sends 100 letters to offer blood testing**
- **100 individuals have their blood tested**
- **MDPH laboratory analyzes blood samples**
- **MDPH sends participants their own blood test results**
- **MDPH releases summary report**